



## Cross Sectional Study to Assess Knowledge about Health Effect of Tobacco Use & Tobacco User's Quitting Attitude among Rural Senior Citizens

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## ABSTRACT

**Background** Phenomenon of "population graying" became a matter of apprehension for stake holders today. Exposure to various insecurities has made Senior citizens's life more difficult. Health issues & co-morbidities are major concern in this age. Tobacco use is one of the major risk factor for many diseases.

**Methodology**-Cross sectional community based study was conducted on 500 senior citizens of a block of rural field practice area of a teaching hospital with the objectives of to assess the awareness about health effects of tobacco & quitting attitude among tobacco users. Data was collected with the help of proforma & analyzed with the help of spss -20. Chi square test was applied for showing significant association.

**Results**- Prevalence of awareness regarding health effect of tobacco use was found to be 56.6%. Knowledge of health effects of smoking was significantly associated with age, sex, religion, marital status, literacy & occupation. Prevalence of positive quitting attitude was found to be 35.4%. Positive quitting attitude was significantly associated with gender, literacy, occupation, knowledge regarding health effect of tobacco use & type of tobacco use.

**Conclusion** -Knowledge about health effect of tobacco use was found to be significantly associated with positive quitting attitude. In order to make aging healthy, deliberate sensitization & effective public action plans are needed that can alter the adverse consequences of graying.

**Key words** -knowledge regarding health effect, tobacco use, quitting attitude, senior citizen

## INTRODUCTION

About 100 million deaths occurred due to tobacco use in 20<sup>th</sup> century. Tobacco kills more than 8 million people each year, 7 million of those deaths are the result of direct tobacco use<sup>1</sup>. Despite social and religious disapproval and historical attempts to legally ban tobacco, its use has continued.<sup>2</sup> Annually; tobacco use is increasing in developing countries by 3.4%. Unless urgent action is taken tobacco use

could kill one billion people during this century.<sup>3</sup> Tobacco users who die prematurely deprive their families of income, raise the cost of health care and hinder economic development. According to population census, the total number of aged people 42.81 lakh in the year 2011. Out of 42.81 lakh 32.65 lakh lives in rural areas. The size of the senior citizen population has risen from 12.1 million in 1901 to approximately 77 million in Census 2001. According to official population projections,

the number of elderly persons will rise to approximately 140 million by 2021.<sup>4</sup> The proportion of senior citizen aged 60 yrs and above is 7.5% and was projected to increase to 20% by the year 2050.<sup>5</sup>

Because of existence of strong correlation of knowledge with practice, an attempt was made to study the very important determinant of tobacco use i.e. knowledge of health effect of tobacco use. As it is very difficult to quit habits at old age, we wanted to know what is elderly smoker's attitude regarding quit smoking. That's why the present study was planned with the objectives of to know awareness regarding health effect of tobacco use & tobacco user's attitude regarding quitting tobacco use in senior citizens in a block of Ujjain.

**METHODOLOGY**

After obtaining the approval from institutional ethical committee, a cross sectional community based study was conducted in a block of Ujjain under the rural field practice area of a teaching hospital. Study participants were briefed about the questionnaire and purpose of the study. Written Informed consent was obtained from the study participants and they were insured about the confidentiality of the information provided by them.

Data regarding socio –demographic factors, knowledge of health effect of tobacco, attitude toward quitting tobacco use were assessed by the help of a proforma containing semi structured questionnaires.

**Study participants** were senior citizens of a block of rural field practice area of a teaching hospital. Out of 3 block of rural field practice area one block was selected by **convenient sampling** as it was nearest one. Elderly Persons who were permanent resident and were available at the time of data collection were **included** in the study while elderly who were seriously ill & who were not willing to participate were **excluded** from study.

**Sample size calculation** As the prevalence of knowledge about health effect of smoking in elderly population can't be found so the prevalence of knowledge taken from a study.<sup>6</sup> In reference study prevalence of knowledge of health effect of tobacco use was found to be 78.23. So prevalence of knowledge of health effect of tobacco use 78 was utilized for sample size calculation. By applying the **Cochran's formula**  $(1.96)^2 pq/L^2$ , we took 78% prevalence of knowledge of health effect of tobacco use, relative error 5% with 95% confidence limit; the estimated sample size was worked out 433. N =

**Table 1 Cross table between various socio demographic factors & Knowledge of health effect**

Variable	Health Effect Knowledge		Total (n=500)(%)	X <sup>2</sup>	df	p-value
	Present (n=283)(%)	Absent (n=217)(%)				
<b>Age</b>						
60-69	192(67.84)	75(34.56)	267(53.4)	64.72	2	0.000*
70-79	75(26.50)	89(41)	164(32.8)			
>=80	16(5.65)	53(24.42)	69(13.8)			
<b>Gender</b>						
Male	188(66.4)	63(29.03)	251(50.2)	68.71	1	0.000*
Female	95(33.56)	154(70.96)	249(49.8)			
<b>Religion</b>						
Hindu	280(98.93)	205(94.47)	485(97)	8.43	1	0.004*
Muslim	3(1.06)	12(5.52)	15(3)			
<b>Marital status</b>						
Married	213(75.26)	124(57.14)	337(67.4)	18.35	1	0.000*
Living alone	70(24.73)	93(42.85)	163(32.6)			
<b>Family</b>						
Nuclear	47(16.60)	40(18.4)	87(17.4)	0.285	1	0.59
Joint	236(83.39)	177(81.56)	413(82.6)			
<b>Literacy</b>						
Literate	121(42.75)	23(8.48)	144(28.8)	61.93	1	0.000
Illiterate	162(57.24)	194(89.40)	356(71.2)			
<b>Occupation</b>						
Working	169(59.71)	51(23.50)	220(44)	65.66	2	0.000
Not working	114(40.28)	166(76.49)	280(56)			
<b>S.E.S.</b>						
1	0	0	0(0)	7.25	3	0.64
11	4(1.41)	2(0.92)	6(1.2)			
111	17(6)	14(6.45)	31(6.2)			
1V	151(53.35)	91(41.93)	242(48.4)			
V	111(39.22)	110(50.69)	221(44.2)			

\* Include Widow/Widower/Never married

$(1.96)^2 \times pq / l^2$  {Where, N= Sample size, P= Prevalence=78, q = 100-prevalence 100-78 =22, l= Relative error of prevalence 5%}. Therefore  $N = (1.96)^2 \times 78 \times 22 / 3.9 \times 3.9 = 433$  By adding non response rate of 10 % of sample size we got 476 which was rounded up to 500.

If participant was able to enumerate at least 5 diseases associated with tobacco use, considered as he is having the knowledge regarding health effect of tobacco use. P-values < 0.05 were considered significant. Data was entered into SPSS version 20 spreadsheet and analyzed. Descriptive analyses were conducted, (percentages, portions, and 95% confidence intervals) for demographic data. A Chi-square test of significance was used for analysis of categorical variables.

## RESULTS & OBSERVATIONS

Table 1 shows most 53% participants belonged to 60-69 years of age group, male & female were almost equal, 97% participants were Hindu, and 67.4 % participants were married. More (82.6%) participants were from joint family, only 29% participants were literate, 92.6% participants belongs to lower socio-economic class.

After application of chi square test Statistically significant association was found between knowledge of health effect of tobacco use & age , sex, religion, marital status, literacy & occupation. As p value for all was <0.05.

Table 2 shows 55.4% participants use tobacco of either form. After application of chi square test knowledge of health effect of tobacco use found to be statistically significantly associated with presence of health problem & type of tobacco used.

Table 3 shows after application of chi square test, statistically significant association was found between the attitude to quit tobacco use with gender, literacy & occupation.

Table 4 shows after application of chi square test quitting attitude was found to be statically significant associated with knowledge regarding health effect of tobacco use & type of tobacco used.

## DISCUSSION

The current study was conducted to assess the awareness of study population regarding health effect of tobacco use and quitting attitude among tobacco users senior citizen of central, India. Studies to assess the knowledge & quitting attitude in senior citizens could not be found, so some other studies with different study population are utilized for discussion.

In present study subjects comprised of 51% males & 49% females. Similar results were also reported

by Madappady S et al <sup>7</sup>. They also enquired about health effect knowledge of tobacco use. A study <sup>8</sup>concluded that over 2/3rd of students considered smoking (66.1%) and chewing tobacco(65.3%) harmful; and more than half considered ETS (58.2%) harmful. Significantly more tobacco users reported that 'Smoking, Chewing/ETS is harmful' than never tobacco users. Joshi U et al<sup>9</sup> concluded that 28.4% of current-consumers were willing to quit,55.5% of them already knew about health hazards. Other survey <sup>10</sup> found the awareness regarding the hazards associated with tobacco use in 41.5% of the students; these findings are comparable to our study findings. Research<sup>11</sup> with similar objectives showed low awareness about risk effect & high knowledge score was significantly associated with quitting intension, these results are also consistent with results of present study. Education & socio economic status was associated with high knowledge. Awareness being greater among females than among males (64.3% vs 35.4%). Evidence reported <sup>12</sup> most of the respondents (84.1%) perceived that cigarette smoking was harmful. Other study <sup>13</sup>concluded that many respondents (88.3%) were aware of health problems of cigarette smoking Higher level of tobacco-related knowledge was found to have a significant impact on positive attitudes towards smoking cessation <sup>14</sup>, Study <sup>15</sup>reported good (96%) awareness about harmful effect of tobacco use , evidence<sup>16</sup> also available that concludes to having good knowledge with favorable quitting attitude. Majority of the study population [94.4%] believed that smoking is definitely harmful to our health. One study reported 298 (72.5%) men and 82 (100%) women, wanted to stop smoking /gutkha chewing<sup>17</sup>A total of 87.6% subjects were aware about the ill effects of smoking.<sup>18</sup>, 64.2% were aware of the hazards of smoking <sup>19</sup>while in current study we found low awareness regarding health effect of tobacco use & poor quitting attitude, but there was a significant association between knowledge of health effect of tobacco use & quitting attitude. Knowledge regarding health effect of tobacco difference may be attributed to of difference in age group of study population & their educational status. The probable reason behind poor quitting attitude may be the senior citizen's careless attitude towards their own health & their entrenched behavior. Study <sup>20</sup>explored the smoking-related Knowledge, Attitudes and Practices (KAP) among young adult male smokers & concluded that young adult males with higher education have a better knowledge of smoking hazards and a more positive attitude toward smoking partially identical to present study. Older smokers in a study <sup>21</sup> (75+ years) were less likely to report that they were attempting to quit smoking.

**Table 2 Cross table between various factors & Knowledge about health effect of tobacco use**

Variable	Health Effect knowledge		Total (n=500)(%)	X <sup>2</sup>	df	p-value
	Present (n=283)(%)	Absent (n=217)(%)				
<b>Health Problem</b>						
Yes	184(65.01)	185(85.25)	369(73.8)	26.01	1	0.000*
No	99(34.98)	32(14.74)	131(26.2)			
<b>Current Tobacco User</b>						
Yes	159(56.18)	118(54.37)	277(55.4)	0.162	1	0.687
No	124(43.81)	99(45.62)	223(44.6)			
<b>Type of tobacco Use</b>						
Smoking	65(40.88)	21(17.79)	86(31)	48.70	2	0.000*
Smokeless	46(28.93)	84(71.18)	130(46.9)			
Combine form	48(30.18)	13(11.01)	61(22)			

**Table 3 Cross table between socio demographic profile & quitting attitude of participants**

Category	Want to Quit		Total (n=277) (%)	X <sup>2</sup>	Df	p-value
	Yes (n=98)(%)	No (n=179)(%)				
<b>Age</b>						
60-69	62(63.26)	99(55.30)	161(58.1)	0.4.451	2	0.108
70-79	31(31.63)	57(31.84)	88(31.8)			
>=80	5(5.10)	23(12.84)	28(10.1)			
<b>Gender</b>						
Male	69(70.40)	100(55.86)	169(61.0)	5.630	1	0.012*
Female	29(29.59)	79(44.13)	108(39.0)			
<b>Religion</b>						
Hindu	90(91.83)	173(96.64)	263(94.9)	3.055	1	0.075
Muslim	8(8.16)	6(3.35)	14(5.1)			
<b>Marital status</b>						
Living with Spouse	61(62.24)	116(64.80)	177(63.9)	0.180	1	0.671
Living alone*	37(37.75)	63(35.19)	100(36.1)			
<b>Family</b>						
Nuclear	12(12.24)	34(18.99)	46(16.6)	2.083	1	0.149
Joint	86(87.75)	145(81)	231(83.4)			
<b>Literacy</b>						
Literate	42(42.85)	45(25.13)	87(31.4)	9.228	1	0.002*
Illiterate	56(57.14)	134(74.86)	190(68.6)			
<b>Occupation</b>						
Working	61(62.24)	81(45.25)	142(51.3)	7.498	2	0.024*
now not working	37(37.75)	98(54.74)	135(48.7)			
<b>S.E.S</b>						
1	0	0	0(0)	1.507	3	0.681
11	2(2)	1(0.55)	3(1.1)			
111	6(6)	9(5.02)	15(5.4)			
1V	48(48.97)	88(49.16)	136(49.1)			
V	42(42.85)	81(45.25)	123(44.4)			

\* Include Widow/Widower/Never married

**Table 4 Cross table between Tobacco use pattern & health effect knowledge & quitting attitude**

Variable	Want to Quit		Total (n=277) (%)	X <sup>2</sup>	df	p-value
	Yes (n=98)(%)	No (n=179)(%)				
<b>Type of tobacco use</b>						
Smoking	32(32.65)	54(30.16)	86(31)	12.74	2	0.002
Smokeless	34(34.69)	96(53.63)	130(46.9)			
Combine form	32(32.65)	29(16.20)	61(22)			
<b>Total</b>	98(35.4)	179(64.6)	277(100)			
<b>Health effect knowledge</b>						
Yes	52(53.06)	67(37.43)	119(42.96)	6.31	1	0.01
No	46(46.93)	112(62.56)	158(57.03)			
<b>Total</b>	98(35.37)	179(64.62)	277(100)			

This finding is more similar to our study possible cause behind this may be common study age group of participants.

## CONCLUSION

Lower awareness regarding health effect of tobacco use & poor quitting attitude was there in rural senior citizens. Along with other factors the positive quitting attitude was found to be significantly associated with higher awareness regarding health effects of tobacco use. Awareness programme may be centerpiece for interventions. But attitude not always reflects the practice & behavior. Actual conversion of favorable knowledge & attitude in practice should be checked by a follow up study. Tobacco free aging can increase opulence & livability of senior citizens, as it abates the chances of various co morbidities.

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